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PTO-1590 (1-2000)

Hexadecimal (base 16) numbers range not from 0 to 9, as in the decimal (base 10) system, but from 0 to 15. Actually, here are the hexadecimal numerals: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F.

To compute the decimal equivalent of a hexadecimal number, multiply each number by the base raised to the appropriate power. Hex 20 therefore would be $2 * 16^1 + 0 * 16^0$, or 32 decimal. (Don't worry if this doesn't make sense; you'll probably never need to figure this out. Just remember to check Table 2-1 for the most common hex equivalents.)

Table 2-1 shows the special URL forms of some common characters that you may encounter while building URL specifications. Notice especially that you also need to codify any use of the percent sign itself so that the Web browser program doesn't get confused. Almost perverse, eh?

Table 2-1   URL Coding for Common Characters

Character	Hex Value	Equivalent URL Coding
Space	20	%20
Tab	09	%09
Enter	10	%0A
Line feed	0D	%0D
Percent	25	%25

Real-life Gopher URLs

Now that you've learned more than you ever wanted to know about Gophers and URLs, you're ready to look at some actual Gopher URLs! The good news is that the majority of Gopher URLs don't look much different from their FTP cousins, as the following example shows:

```
gopher://owl.trc.purdue.edu/
```

The preceding example is the simplest possible Gopher URL. The URL specifies the Gopher service (gopher://) and the name of the server system (owl.trc.purdue.edu/). In this case, the system is a server at Purdue University (my alma mater).

Here is another example:

```
gopher://press-gopher.uchicago.edu:70/1
```

This URL specifies the main information Gopher for the University of Chicago Press. Instead of using the default Gopher port, though, the site opted for port 70 (who knows why?). After the port, the URL indicates that the first thing the user will see is a directory, specified in a Gopher URL by inserting /1. When no *specific* directory is indicated in the URL, the preceding URL actually accomplishes exactly the same thing as the slightly simpler

```
gopher://press-gopher.uchicago.edu:70/
```

Here is a slightly longer example:

```
gopher://boombox.micro.umn.edu/0/gopher/Macintosh-TurboGopher/helper-
applications/Anarchie-140.sit
```

This URL loads an executable file (Anarchie) that is available through the Gopher server. Anarchie, for those on a Macintosh, is a fabulous shareware program that lets you easily access the Archie FTP database system and then actually grabs the files for you. Think of Archie as an intelligent assistant who finds and obtains copies of any software or files you want on the Internet.

Electronic Mail via URL

URLs for e-mail are quite simple, fortunately, and require minimal explanation. You can specify any e-mail address as a URL simply by prefacing the snippet mailto: as the service name, as in the following example:

```
mailto:taylor@netcom.com
```

Again, make sure that you don't use spaces in the URL.

Of all the links demonstrated in this Web document, I think that the most notable is the `mailto:` link in the first line of text. Notice that the `mailto:` link is not presented as

```
<A HREF="mailto:taylor@netcom.com">Click here</A> to send me mail.
```

Instead, the link is smoothly and transparently integrated into the prose:

```
<A HREF="mailto:taylor@netcom.com">Drop me a note!</A></I>
```

tip

Try to avoid using Click here and similar labels for hypertext tags: cool Web pages come from creative, meaningful, and unobtrusive integration of links into the text.

Pointers to Your Other Pages

Being able to link to external information sources and sites on the Internet clearly is a huge boon to Web designers, but if you stopped at that and never learned any more, you'd be missing half the picture. The one piece that you still need to learn is how to reference other documents on your own server.

Although *personal* home pages often have a simple format similar to the examples in this chapter (that is, a few paragraphs about the person, perhaps a graphic or two, and then a list of favorite sites on the Web), more-complex and sophisticated sites have a wide range of different Web documents available. These sites include the appropriate links to the other internal documents so that readers can easily jump among them.

There is an easy way and a hard way to reference internal documents (documents on your server). The hard way builds on the earlier examples: You figure out the full URL of each page and use those URLs as the hypertext reference tags. The easy way to reference another document on your server is to specify the document name only (or path and name) without any of the URL preface information. If you have a starting page called `home.html` and a second page called `resume.html`, for example, you could create the following link:

You're welcome to `<A HREF="resume.html">read my resume</A>`.

(Note: Purists would use the HTML code `résumé` instead of `resume`.)

Perhaps you want to make several files accessible on your Web server, and you want some sensible way to organize them. A hierarchical directory structure can prove to be a big advantage.

If you have a variety of information about the sandwiches and soups at the virtual deli featured in Chapter 5, you could organize that information as shown in Figure 6-5.
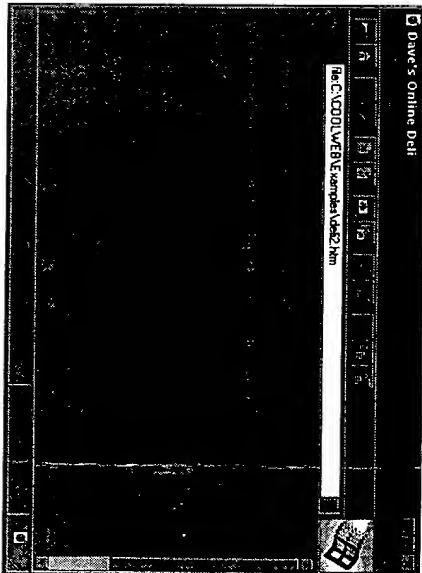

Figure 6-5: Organizing the deli menu data.

Now when people connect to the base URL (the address of the top-level menu itself), they see the formatted results of the following HTML code:

```
<HTML>
<HEAD>
<TITLE>Dave's Online Deli</TITLE>
```

(continued)

```
</HEAD><BODY>
<H2>Welcome to the Virtual World of Dave's Online Deli!!!</H2>
Sandwich Choices:
<UL>
<LI><A HREF="sandwiches/turkey.html">Turkey on a croissant</A>
<LI><A HREF="sandwiches/ham.html">Ham and Cheese</A>
<LI><A HREF="sandwiches/veggie.html">Veggie Delight</A>
</UL>
Soups of the Day:
<UL>
<LI><A HREF="soups/tomato.html">Tomato</A>
<LI><A HREF="soups/tomato.html">Tomato and Rice</A>
<LI><A HREF="soups/lentil.html">Lentil</A>
<LI><A HREF="soups/corn-chowder.html">Corn Chowder</A>
<LI><A HREF="soups/mystery.html">Mystery Soup</A>
</UL>
<I>Please order at <A HREF="order_counter.html">the counter</A>
</I>
</BODY>
</HTML>
```

The new virtual-deli home page (which Web folks call the root, or the first page that visitors see when reaching a site) would be formatted as shown in Figure 6-5.

You can't see it in Figure 6-5, but the HTML code contains an error. To understand the problem — a relatively common one in complex lists — consider what happens if someone wants more information about the tomato soup instead of the tomato-and-rice soup. Both soup choices point to the same second page: soups/tomato.html.

If a Web user pops into the virtual deli and wants to find out more about the lentil soup, for example, he or she might click on the hypertext link lentil. The user then would see another HTML document that provided information about the soup (and perhaps even included a picture of it). But how could you add a link back to the deli home page? Consider the following listing, paying close attention to the last few lines:

```
<HTML>
<HEAD>
<TITLE>Lentil Soup: A Cornerstone of the Virtual Deli</TITLE>
</HEAD>
<BODY>
<H1>Lentil Soup</H1>
It will come as no surprise to regular patrons of the Virtual Deli that
our lentil soup has quickly become one of the most popular items. With
its combination of six different lentil beans, some succulent organic
vegetables,
and our carefully filtered fresh spring water, a hot bowl of our lentil
soup on a cold day is unquestionably one of life's pleasures.
<P>
We'd love to tell you the recipe too, but feel like you really need to
come in and try it for yourself.
<P>
<B>We Also Recommend:<A HREF="../sandwiches/veggie.html"> a veggie
sandwich to accompany.</A></B>
<HR>
<A HREF="../deli.html">Back up to the main menu.</A>
</BODY>
</HTML>
```

When visitors to the virtual deli arrive at the page created by the preceding HTML text, they have moved down a level in the server's hierarchical directory structure, but they don't know that. The URLs in the document, however, tell the story. The main menu is ./deli.html. The recommended sandwich to accompany the soup is in another directory — hence, its ./sandwiches folder specification. See Figure 6-6 to see what the page looks like from a browser (Explorer).

tip

■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■
In the previous listings, you can see the use of relative filename addresses. For example, "../deli.html" pops up one level in the file system to find the deli.html page. This makes for easy HTML coding but beware that problems can easily arise if you move any of the pages around without the rest of the files.
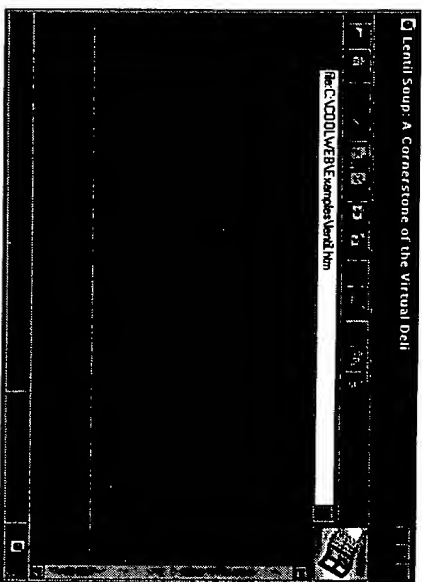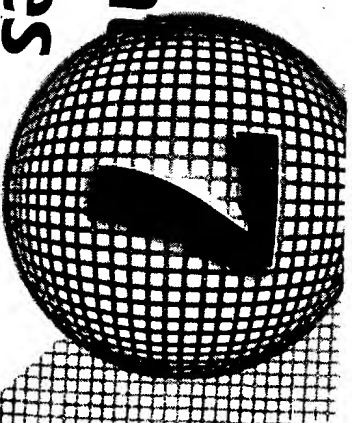
file:C:\COOL\WEB\Examples\World.htm

Figure 6-6: The lentil soup special.

In this chapter, you learned how to include links to other sites on the World Wide Web and throughout the Internet. You also learned how to organize a set of Web documents in manageable folders and how to specify other documents on your own server with minimal fuss. The next chapter focuses on internal document references, which enable you to include a table of contents at the top of a large Web document. Chapter 7 also explains how to use internal document markers as hot links that enable people to jump to a specific spot in any Web document.

Internal Document References

This chapter shows you how to add a table of contents to a large Web document and use that table as a hot link to allow people to jump to a specific spot in that same or different document on your server.

In This Chapter

☐ Defining Web-document jump targets

☐ Adding jump hot links to your Web pages

☐ Linking to jump targets in external documents

In Chapter 6, you learned about the anchor tag <A>; you also learned how to use the HREF attribute to build links to other pages on the World Wide Web. Another, equally valuable use for the <A> tag is the internal document reference, the focus of this chapter. You will find that as documents become larger, the capability to zoom (jump) to a pre-defined spot in a document can be invaluable.

Defining Web Document Jump Targets

I commented in Chapter 6 that the anchor tag <A> is the first of the HTML formatting tags that allow you to specify attributes. Note that rather than a format like <URL="something"></URL>, which would be more consistent with the other pieces of HTML, the format of the anchor tag is <A something></A>. This format is useful because some complex tags, particularly the instructions for including graphics, hav dozens of variations. Imagine <IMAGE LEFTBOTTOM="imagefile"> or something simi-lar. Instead, attributes were included in the design of HTML to allow a wide variety of different formats to be easily specified.

The greatest value of these attributes in formatting tags is that you can provide a wonderful sense of consistency in the interface and presentation of information. You can have half your links lead to other pages on the Web, with three links moving the reader farther down in the document and the rest of the links leading to other pages on your own server. The links will all have the same appearance (blue and underlined in most cases) and function (causing the browser to "jump" directly to the specified page).

Up to this point, the documents shown in this book have been short, with the majority of the information confined to the first screen of information within the browser. Such an approach to Web document design results in pages that are easy to navigate. Sometimes, however, it's impossible to keep a document from stretching over several pages.

If I wanted to write this chapter as an HTML document, I could make each section a different document. Even then, however, some of those sections would be sufficiently long that readers would be forced to scroll to find the information that they want.

A better layout is one in which the entire chapter is a single document, but the topic headers actually are links to the appropriate spots farther down in the page. Clicking on a table of contents entry like Adding jump hot links to your Web page, for example, would move you to that spot instantly. The challenge, of course, is to figure out when a certain length document is best as a single HTML file, and when it is best as a set of files. My rule of thumb is to move pages at logical jump points and to try to minimize load time for readers. This chapter could be a single HTML document, but the book itself would clearly be a set of documents.

The targets of internal Web document jumps are known as *anchors*. The HTML tag for an anchor point is another value for the <A> tag: <A name=*value*>. The *value* can be any sequence of characters, numbers, and punctuation marks, but I recommend that you stick with a strategy of mnemonic anchor names, such as *section1* or *references*. Some clients insist that all characters in the anchor be in lowercase, so you may want to experiment before you build a complex document.

The following example shows how a set of tags might look in a paper entitled "Sex Education: Morals versus Ethics." The anchors are built from the author names and years of publication, which then can be referenced as links in the rest of the document.

```
<A NAME="references">
<H3>References</H3></A>
<OL>
<LI><A NAME="driskill-delampo92">
```

```
Driskill, P.; &amp; Delampo, R. L. (1992).</A> Sex education in the
1990s: A systems perspective on family sexuality.<I>Journal of Sex
Education and Therapy</I>, 18, 175-185.
<LI><A name="dewitt93">
Eimer-DeWitt, P. (1993).</A> Making the case for abstinence.<I>Time
</I>, 141(5), 64-65.
<LI><A name="fay-gordon92">
Fay, G. &amp; Gordon, S. (1992).</A> Moral sexuality education and
democratic values.<I>Theory into Practice</I>, 28, 211-216.
<LI><A name="gibbs93">
Gibbs, N. (1993).</A> How should we teach our children about sex?<I>
Time</I>, 14(5), 60-66.
<LI><A name="gordon90">
Gordon, S. (1990).</A> Sexuality education in the 1990s.<I>Health
Education</I>, 21, 4-5.
<LI><A name="gordon91">
Gordon, S. (1991).</A> Sex education: What we're doing wrong.<I>The
Humanist</I>, Sep/Oct, 43-44.
<LI><A name="greenberg90">
Greenberg, J. S. (1990).</A> Preparing teachers for sexuality education.
<I>Theory into Practice</I>, 28, 227-232.
<LI><A name="gudorf91">
Gudorf, C. (1991).</A> Are you giving your kids double messages about
sex?<I>U. S. Catholic</I>, 56(9), 20-27.
<LI><A name="haffner90">
Haffner, D. W. (1990).</A> AIDS and sexuality education.<I>Theory into
Practice</I>, 28, 198-202.
<LI><A name="hale92">
Hale, J. P. (1992).</A> Sex ed. up to date.<I>National Review</I>, May
25, 31-33.
<LI><A name="kirkby93">
Kirby, D. (1993).</A> Research on effectiveness of sex education pro-
grams.<I>Theory into Practice</I>, 28, 165-171.
</OL>
```

Viewed in a Web browser (see Figure 7-1), the preceding document looks like an attractive list of journal references. Because anchors are destinations on the current page rather than links to go elsewhere, the text between the <A NAME> and </A> is not highlighted in any way when displayed.
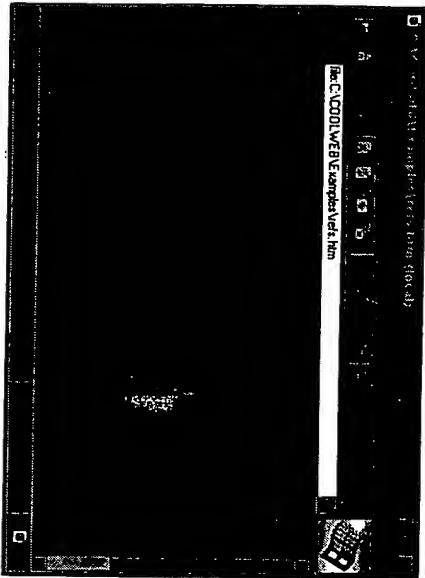
Figure 7-1: References from a sex-education paper.

What I've done in the example here is not only add links to each of the reference citations but also add a link to the references section itself, which could then be easily included as part of a table of contents to the document. This would offer readers the chance to jump directly to the opening arguments, supporting arguments, conclusions, or (in this case) the references section of the document.

Adding Jump Links to Your Web Pages

The partner of an anchor in HTML documents is the formatting tag that defines the *jump*, or active link within the document. It's a variant on the <A> format that you're already familiar with; the tag turns out to be another HREF hypertext reference, this time with the URL replaced by the anchor name prefaced by a pound sign (#).

For example, if the *anchor* that you want to connect is specified as <A NAME="references">, you would specify the *jump* as <A HREF="#references">go to reference info</A>.

In creating cool Web documents, the goal is to avoid phrases such as the following:

<A HREF="#references">Click here</A> to see the references.

Instead, try to integrate the references more smoothly into the text, as follows:

<A HREF="#references">References and Bibliography</A>.

For a document that discusses ingredients for mixed fruit drinks, for example, the HTML source might look like the following:

```
<H2>Ingredients for an Energy Blend</H2>
<UL>
<LI><A HREF="#strawberry">Strawberries</A>
<LI><A HREF="#blueberry">Blueberries</A>
<LI><A HREF="#mango">Mango</A>
<LI><A HREF="#banana">Bananas</A>
<LI><A HREF="#raspberry">Raspberries</A>
<LI><A HREF="#peach">Peaches</A>
</UL>
```

This list would be formatted attractively, as Figure 7-2 shows. The format is identical to the way the information would be presented if the links were external, perhaps even on different servers on the Web.

For a different way to use internal references, examine the following snippet from the main section of the sex-education paper, which includes internal links to the anchors in the references section. Notice that an anchor also has been assigned to the section head.
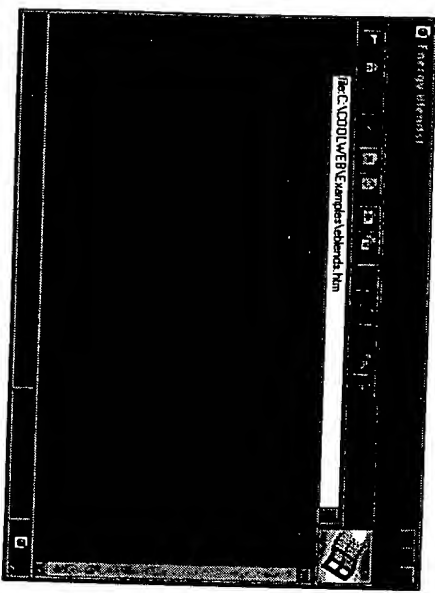
Figure 7-2: Energy-blend ingredients.

Seven values for holistic sexuality education have been proposed, ranging from the observation that sexual decisions should support the dignity, equality, and worth of each individual and that parenthood requires many responsibilities that adolescents are usually unable to assume, to the idea that it is usually preferable for adolescents to refrain from sexual intercourse (<A HREF="#fay-gordon92">Fay & Gordon, 1992</A>).
<P>
<A NAME="the-debate">
<H2>The Debate over Research Findings</H2></A>
Research on sex education curricula is controversial. Values and choices attitudes of students demonstrated they were significantly more supportive of abstinence and significantly less likely to <I>intend to</I> engage in sexual intercourse. Followup interviews four months later revealed that the differences between the group and national norms was no longer statistically significant (<A HREF="#kirby90">Kirby, 1990</A>). Many educators also observe that none of the pro-abstinence-only curricula research has been submitted to peer-review journals (<A HREF="#tapia93">Tapia, 1993</A>).

<P>
One research project often quoted by abstinence-only supporters, demonstrated that pregnancy rates among students having taken the Sex Respect program at a San Diego school were an impressive 45 percent lower than those who hadn't. Later research by the San Diego <I>Union</I>, however, found that much of the information had been fabricated (<A HREF="#dewitt93">Ermen-DeWitt, 1993</A>). <A HREF="#tapia93">Tapia, 1993</A>).
<P>

In a browser, the paper is displayed in a format that is quite pleasing to the eye and easy to navigate. All the hot links and anchor information are appropriately hidden from view or sufficiently subtle that the reader can focus on the material itself (see Figure 7-3).
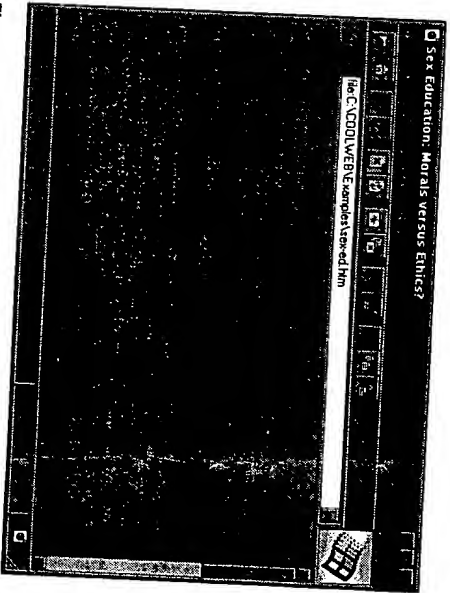
Figure 7-3: The research paper with reference hot links.

When scholars first envisioned the need for citations in research to defend and explain where particular views and ideas originate, what they dreamed of is surprisingly close to what we now can include in Web documents. If you are surprised by something in such a paper, or if the paper whetted your appetite for a more extensive treatment of the subject, you can click on the author citation. You then instantly move to the references section, and the appropriate citation is shifted to the top of the screen so that you can identify the information that you seek.

Figure 7-4 shows what would happen if you wanted more information on the Fay & Gordon article and clicked the <A HREF="#fay-gordon92"> link.
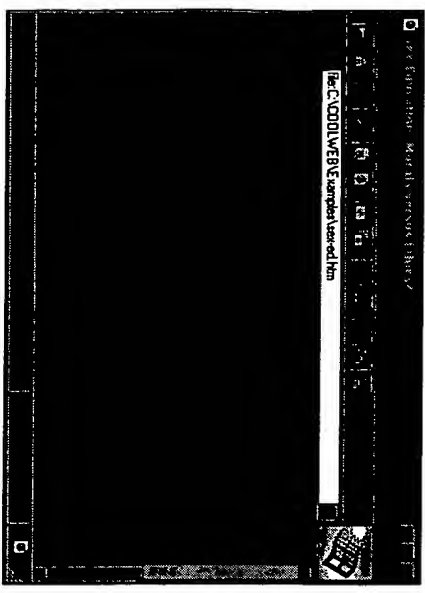

Figure 7-4: Web browser jumped to the references.

One thing to keep in mind when you specify your anchor points is the fact that the exact spot of the reference becomes the top of the displayed document. A sequence like the following shows the possible danger therein:

```
<H2>Bananas</H2>
<A NAME="BANANAS">The banana</A>
is one of the most exotic, yet most easily purchased, fruits in the
world.
```

The raw Web document is attractively formatted, but the resulting behavior will not be what you seek: Users who jump to the "#BANANA" tag will have the preceding sentence in the first line of their displays; the <H2> header will be one line off-screen. A much better idea is to flip the two items, as follows:

```
<A NAME="BANANAS">
<H2>Bananas</H2></A>
The banana is one of the most exotic, yet most easily purchased, fruits
in the world.
```

note

Always test your Web documents before unleashing them on the world. I can't overemphasize this. Subtle problems with where your anchor tags are placed, for example, are classic mistakes found in otherwise cool Web pages.

Jumping Into Organized Lists

Anchors and jump points also are commonly used to help readers navigate large lists of alphabetically sorted information. Consider the following simple phone book layout:

```
<TITLE>Jazz Institute Internal Phone Book</TITLE>
<H1>Jazz Institute Internal Phone Book</H1>
<P>
Section Shortcut:
<A HREF="#a-c">[A-C]</A>
<A HREF="#d-h>[D-H]</A>
<A HREF="#i-l>[I-L]</A>
<A HREF="#m-n>[M-N]</A>
<A HREF="#o-s>[O-S]</A>
<A HREF="#t-z>[T-Z]</A><BR>
<H2><A name="a-c">A-C</A></H2>
Benson, George (x5531)<BR>
Coleman, Ornette (x5143)<BR>
Coltrane, John (x5544)
<H2><a name="d-h">D-H</A></H2>
Dorsey, Tom (x9412)<BR>
```

```
(continued)
Ellington, Duke (x3133)<BR>
Getz, Stan (x1222)<BR>
<H2><a name="i-l">I-L</A></H2>
Jackson, Milt (x0434)<BR>
Laffite, Guy (x5358)<BR>
<H2><a name="m-n">M-N</A></H2>
Monk, Thelonious (x3333)<BR>
Noone, Jimmie (x5123)<BR>
<H2><A name="o-s">O-S</A></H2>
Parker, Charlie (x1414)<BR>
Peterson, Oscar (x8983)<BR>
Reinhardt, Django (x5351)<BR>
<H2><a name="t-z">T-Z</A></H2>
Taylor, Billy (x3311)<BR>
Tyner, McCoy (x4131)<BR>
Waller, Fats (x1321)<BR>
```

Although the HTML in the preceding example is complex, Figure 7-5 shows that the result not only looks cool but is also useful.
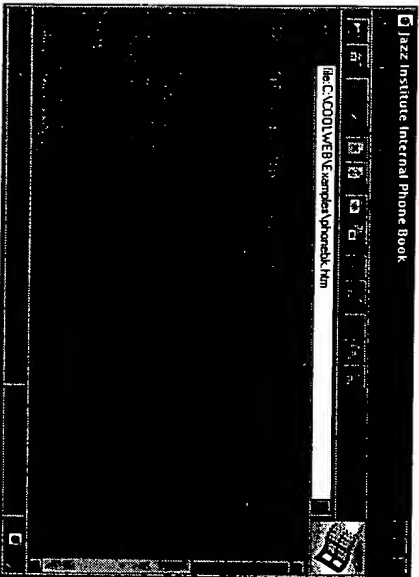
Figure 7-5: The Jazz Institute phone book.

You can start to get a feeling for how complex HTML text can become by imagining that each entry in the phone list actually is a link to that person's home page or other material somewhere else on the Web. Every line of information displayed could be the result of four or more lines of HTML.

Linking to Jump Targets in External Documents

Now that you're familiar with the concept of jumping around within a single document, you'll be glad to hear that you can also add the *#anchor* notation to the end of any Web URL to make that link move directly to the specific anchor point in the document.

Suppose, for example, that the sex-education paper resided on a system called research.educ.purdue.edu and that its full URL was http:// research.educ.purdue.edu/Students/Taylor.D/500D/sex-ed.html.

A visit to the page reveals that a variety of anchor tags are embedded therein, including the references tag at the beginning of the references section of the paper. You could link directly to that spot from another Web page, as in the following example:

```
Other people on the Internet have chosen different references
for their exploration of the ethical issues surrounding
sex education in the United States. Notable is the article
<A HREF="http://research.educ.purdue.edu/Students/Taylor.D/500D/
sex-ed.html">Sex Education: Morals or Ethics?</A> by
Dave Taylor, with his extensive
<A HREF="http://research.educ.purdue.edu/Students/Taylor.D/500D/
sex-ed.html#references">set of references</A>
Other sources to explore include
```

The prose is displayed in a Web browser as you would expect. Figure 7-6 shows that the HREF that includes the specific internal link #references is displayed as just a link, underlined and in blue.
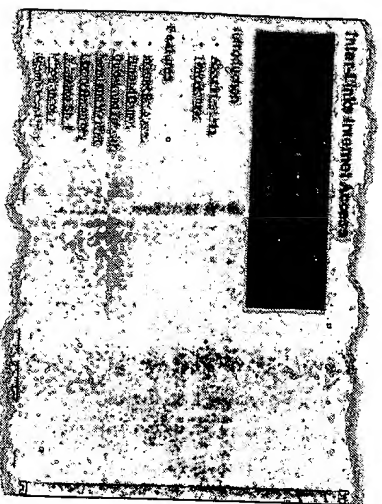
Figure 12-10: Navigate the Web with Inter-Links.

Figure 12-10 also illustrates something else: A Web site can offer a great deal of useful information without being particularly cool. (I expect that, by now, you could write a page like this with your eyes closed.)

The InterNIC Directory of Directories

http://ds.internic.net/ds/dsdirofdirs.html

The Internet may appear to be an amazing anarchy, but there *is* a place with some semblance of order, a slight method to the madness. What little control that exists originates at the Internet Network Information Center, known informally as the InterNIC. InterNIC subcontracts with different vendors. The directory information is run by AT&T, as Figure 12-11 makes obvious.

This site has a ton of great stuff, but AT&T dropped the ball in the grand scheme, because the directory, believe it or not, doesn't have any actual links to other sites! If you find a directory that sounds interesting, you have to either print out that page or write down the URL that you want, just to type it again in your browser — not a very cool arrangement, in my opinion. Still, this site is an important one, and you'll want to include your information here if that information is relevant.

Figure 12-11: The InterNIC Directory of Directories.

This section contains sites that are dedicated to commerce.

Business-Only Sites

The Internet Mall

http://www.iw.com/imall/

A site that's near and dear to my heart is the Internet Mall, the only commercial directory on the Internet that focuses exclusively on companies that actually sell products or services. It's also a favorite of mine because, in fact, I run the Internet Mall! If you have a business venture that's just joined the Web, you definitely should let me know so that I can add you to the Internet Mall. Figure 12-12 shows the opening screen.

The design of this site shows one way that you can work with small graphics and still have an interesting layout: Make your button graphics meaningful.

Figure 12-12: The Internet Mall.

Open Markets Commercial Sites Index

http://www.directory.net/

If your business is on the Web and you want to ensure that you're in the electronic equivalent of the yellow pages, Open Market's Commercial Sites Index is the best choice available (see Figure 12-13). Listing almost 3,500 commercial sites, the Open Market site is a great place to start if you're looking for other companies on the Web.

The design of the Open Market site is rather unusual; it's the only important announcement site that has a search input box near the top of the layout. I don't particularly like the design because I like to browse by category. But when things are organized purely by the name of the business, this approach is better than just having a long list of names.

Figure 12-13: Open Market's Commercial Sites Index.

Apollo Advertising

http://apollo.co.uk/

A very different approach — one reminiscent of City.Net, shown earlier in this chapter — is the Apollo Advertisement site, located in England (see Figure 12-14). Notice particularly the size of the world graphic and the very attractive APOLLO graphic at the top of the page. The prose at this site (including frequent typographical errors) is frustrating, but Apollo Advertising still can be a terrific spot to advertise your new Web site.

Figure 12-14: Apollo Advertising.

> **tip**
>
> Don't forget that some users may not load the graphics. Always make sure that your design tries to take this fact into account.

If you scroll below the map of the world, you see a list of bulleted items for each country. That list is invaluable for people with slower connections who opt not to preload all graphics before working with a Web page.

BizWeb

http://www.bizweb.com/

BizWeb offers an index on the very first page of the Web site (see Figure 12-15).

Figure 12-15: BizWeb.

You can see that the designer got a *little* carried away with the opening graphic. Rather than functioning as a cool design element, the graphic forces users to scroll down the page to find any interesting information — not the best design, in my view. The organization of shops and companies at this site, however, is very good, and BizWeb is a good spot to list your commercial Web site.

Fee-Based Advertising Spots

Plenty of Web sites charge you money for a listing and/or require you to join their organization in order to get a link from their page to yours. Are these spots worth it? You'll have to decide for yourself. If you're a small entrepreneur, you probably won't be able to ante up the fees.

Many fee-based sites do, however, offer interesting approaches to Web page design. An example is MecklerWeb, from MecklerMedia (see Figure 12-16). A listing at this site, like any of the commercial spots, isn't cheap. But if you have a compelling need to generate traffic on your Web site, joining one of these sites can be the way to go.

information

The small subset of data that is actually useful and meaningful to you at the current moment.

in-line graphics

Graphics that appear beside the text in a Web page when viewed via a browser (as opposed to graphics that require separate viewer programs).

the Internet

The global network of networks that enables some or all of the following: exchange of e-mail messages, files, Usenet newsgroups, and World Wide Web pages. Also known as *the Net*.

italics

A typographic convention typically used for emphasis or citations; *this text is italicized.*

link

A word, picture, or other area of a Web page that users can click on to move to another spot in the document or to another document.

markup language

A special type of programming language that allows users to describe the desired appearance and structural features of a document.

Mosaic

The original World Wide Web browser program developed at the National Center for Supercomputing Applications at the University of Illinois. Its release in 1993 sparked the explosive growth of the Web and helped boost interest in the Internet. Many software programs similar to Mosaic — commercial, shareware, and freeware versions for almost any platform — have been developed since Mosaic's release.

the Net

Another term for the *Internet.*

Netscape

A World Wide Web browser developed by Netscape Communications, created by some of the original NCSA Mosaic programmers. Netscape, more formally Netscape Navigator, may be the most popular browser on the Net.

ordered list

A list of items, often numbered, that describes steps in a process (steps 1, 2, 3, and so on).

pointer

A word, picture, or other area that users can click on to move to another spot in the document or to another document; same as *link.*

port

A particular "frequency" used to transfer a particular type of information between Internet computers; FTP uses a specific port, whereas HTTP uses another. Somewhat analogous to television channels.

SGML (Standardized General Markup Language)

The markup language that is the parent of HTML. SGML provides a means of defining markup for any number of document types (such as HTML). You don't mark up text in SGML, per se — you mark up text using an application or instance of SGML. HTML is one of those applications.

TCP/IP (Transfer Control Protocol/Internet Protocol)

A system that networks use to communicate with each other over the Internet.

telnet

An Internet service that enables users to log on to a remote system and work on it as though they were directly connected to the system on site.

typeface

A particular design of a set of characters and symbols. Times and Courier are common typefaces. A specific size and style of a typeface — Courier 12 point, for example — is known as a *font.*

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Go Behind the Scenes of Popular Web Sites and Learn the SECRETS for GENERATING TRAFFIC to Your Web Pages

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Hexadecimal (base 16) numbers range not from 0 to 9, as in the decimal (base 10) system, but from 0 to 15. Actually, here are the hexadecimal numerals: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F.

To compute the decimal equivalent of a hexadecimal number, multiply each number by the base raised to the appropriate power. Hex 20 therefore would be $2 * 16^1 + 0 * 16^0$, or 32 decimal. (Don't worry if this doesn't make sense; you'll probably never need to figure this out. Just remember to check Table 2-1 for the most common hex equivalents.)

Table 2-1 shows the special URL forms of some common characters that you may encounter while building URL specifications. Notice especially that you also need to codify any use of the percent sign *itself* so that the Web browser program doesn't get confused. Almost perverse, eh?

Table 2-1 URL Coding for Common Characters

Character	Hex Value	Equivalent URL Coding
Space	20	%20
Tab	09	%09
Enter	0A	%0A
Linefeed	0D	%0D
Percent	25	%25

Real-life Gopher URLs

Now that you've learned more than you ever wanted to know about Gophers and URLs, you're ready to look at some actual Gopher URLs! The good news is that the majority of Gopher URLs don't look much different from their FTP cousins, as the following example shows:

The preceding example is the simplest possible Gopher URL. The URL specifies the Gopher service (gopher://) and the name of the server system (owl.trc.purdue.edu/). In this case, the system is a server at Purdue University (my alma mater).

Here is another example:

This URL specifies the main information Gopher for the University of Chicago Press. Instead of using the default Gopher port, though, the site opted for port 70 (who knows why?). After the port, the URL indicates that the first thing the user will see is a directory, specified in a Gopher URL by inserting /1. When no *specific* directory is indicated in the URL, the preceding URL actually accomplishes exactly the same thing as the slightly simpler

Here is a slightly longer example:

This URL loads an executable file (anarchie) that is available through the Gopher server. Anarchie, for those on a Macintosh, is a fabulous shareware program that lets you easily access the Archie FTP database system and then actually grabs the files for you. Think of Archie as an intelligent assistant who finds and obtains copies of any software or files you want on the Internet.

Electronic Mail via URL

URLs for e-mail are quite simple, fortunately, and require minimal explanation. You can specify any e-mail address as a URL simply by prefacing the snippet mailto: as the service name, as in the following example:

Again, make sure that you don't use spaces in the URL.

Of all the links demonstrated in this Web document, I think that the most notable is the `mailto:` link in the first line of text. Notice that the `mailto:` link is not presented as

```
<A HREF="mailto:taylor@net.com">click here</A> to send me mail.
```

Instead, the link is smoothly and transparently integrated into the prose:

```
<A HREF="mailto:taylor@net.com">Drop me a note</A>
```

> Try to avoid using *Click here* and similar labels for hypertext tags; cool
> Web pages come from creative, meaningful, and unobtrusive integra-
> tion of links into the text.

Pointers to Your Other Pages

Being able to link to external information sources and sites on the Internet clearly is a
huge boon to Web designers, but if you stopped at that and never learned any more,
you'd be missing half the picture. The one piece that you still need to learn is how to
reference other documents on your own server.

Although *personal* home pages often have a simple format similar to the examples in
this chapter (that is, a few paragraphs about the person, perhaps a graphic or two, and
then a list of favorite sites on the Web), more-complex and sophisticated sites have a
wide range of different Web documents available. These sites include the appropriate
links to the other internal documents so that readers can easily jump among them.

There is an easy way and a hard way to reference internal documents (documents on
your server). The hard way builds on the earlier examples: You figure out the full URL
of each page and use those URLs as the hypertext reference tags. The easy way to
reference another document on your server is to specify the document name only (or
path and name) without any of the URL preface information. If you have a starting
page called `home.html` and a second page called `resume.html`, for example, you
could create the following link:

You're welcome to <A HREF="resume.html">read my resume</A>.

(Note: Purists would use the HTML code résumé instead of resume.)

Perhaps you want to make several files accessible on your Web server, and you want
some sensible way to organize them. A hierarchical directory structure can prove to be
a big advantage.

If you have a variety of information about the sandwiches and soups at the virtual deli
featured in Chapter 5, you could organize that information as shown in Figure 6-5.
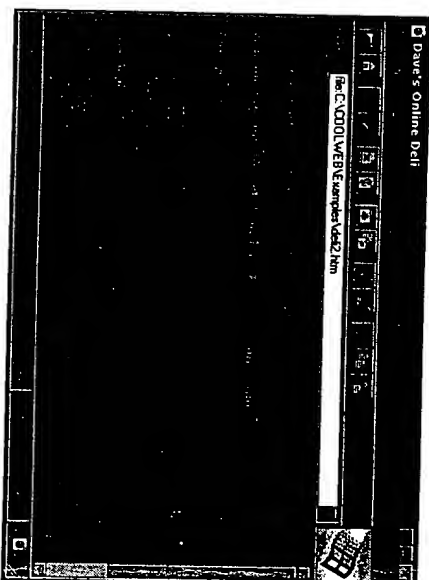

Figure 6-5: Organizing the deli menu data.

Now when people connect to the base URL (the address of the top-level menu itself),
they see the formatted results of the following HTML code:

```
<HTML>
<HEAD>
<TITLE>Dave's Online Deli</TITLE>
```

```
(continued)
<HEAD><BODY>
<h2>Welcome to the virtual World of Dave's Online Deli!</h2>
Sandwich choices:
<UL>
<LI><A HREF="sandwiches/turkey.html">Turkey on a Croissant</A>
<LI><A HREF="sandwiches/ham.html">Ham and Cheese</A>
<LI><A HREF="sandwiches/veggie.html">Veggie Delight</A>
</UL>
Soups of the day:
<UL>
<LI><A HREF="soups/tomato.html">Tomato</A>
<LI><A HREF="soups/tomato.html">Tomato and Rice</A>
<LI><A HREF="soups/lentil.html">Lentil</A>
<LI><A HREF="soups/corn_chowder.html">Corn Chowder</A>
<LI><A HREF="soups/mystery.html">Mystery Soup</A>
</UL>
<I><P>Please order at <A HREF="order.html">the counter</A>
</I>
</BODY>
</HTML>
```

The new virtual-deli *home page* (which Web folks call the root, or the first page that visitors see when reaching a site) would be formatted as shown in Figure 6-5.

You can't see it in Figure 6-5, but the HTML code contains an error. To understand the problem — a relatively common one in complex lists — consider what happens if someone wants more information about the tomato soup instead of the tomato-and-rice soup. Both soup choices point to the same second page: soups/tomato.html.

If a Web user pops into the virtual deli and wants to find out more about the lentil soup, for example, he or she might click on the hypertext link lentil. The user then would see another HTML document that provided information about the soup (and perhaps even included a picture of it). But how could you add a link back to the deli home page? Consider the following listing, paying close attention to the last few lines:

```
<HTML>
<HEAD>
<TITLE>Lentil Soup: A Cornerstone of the Virtual Deli</TITLE>
</HEAD>
<BODY>
<H3>Lentil Soup</H3>
It will come as no surprise to regular patrons of the virtual deli that
our lentil soup has quickly become one of the most popular items, with
its combination of six different lentil beans, some succulent organic
vegetables, and our carefully filtered fresh spring water, a pot bowl of
soup on a cold day is unquestionably one of life's pleasures.
<P>
We'd love to tell you the recipe too, but feel like you really need to
come in and try it for yourself.
<P>
<B>We Also Recommend:</B> <A HREF="../sandwiches/veggie.html"> a Veggie
sandwich to accompany.</A></B>
<HR>
<A HREF="../deli.html">Back up to the main menu.</A>
</BODY>
</HTML>
```

When visitors to the virtual deli arrive at the page created by the preceding HTML text, they have moved down a level in the server's hierarchical directory structure, but they don't know that. The URLs in the document, however, tell the story. The main menu is ./deli.html. The recommended sandwich to accompany the soup is in another directory — hence, its ./sandwiches folder specification. See Figure 6-6 to see what the page looks like from a browser (Explorer).

tip

■ ■

In the previous listings, you can see the use of relative filename addresses. For example, "../deli.html" pops up one level in the file system to find the deli.html page. This makes for easy HTML coding but beware that problems can easily arise if you move any of the pages around without the rest of the files.
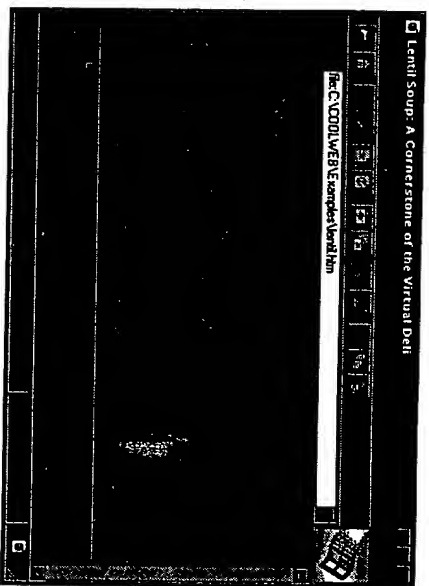
Figure 6-6: The lentil soup special.

- In this chapter, you learned how to include links to other sites on the World Wide Web and throughout the Internet. You also learned how to organize a set of Web documents in manageable folders and how to specify other documents on your own server with minimal fuss. The next chapter focuses on internal document references, which enable you to include a table of contents at the top of a large Web document. Chapter 7 also explains how to use internal document markers as hot links that enable people to jump to a specific spot in any Web document.

Internal Document References

This chapter shows you how to add a table of contents to a large Web document and use that table as a hot link to allow people to jump to a specific spot in that same or different document on your server.

In This Chapter

- ☐ Defining Web-document jump targets
- ☐ Adding jump hot links to your Web pages
- ☐ Linking to jump targets in external documents

In Chapter 6, you learned about the anchor tag <A>; you also learned how to use the HREF attribute to build links to other pages on the World Wide Web. Another, equally valuable use for the <A> tag is the internal document reference, the focus of this chapter. You will find that as documents become larger, the capability to zoom (jump) to a predefined spot in a document can be invaluable.

Defining Web Document Jump Targets

I commented in Chapter 6 that the anchor tag <A> is the first of the HTML formatting tags that allow you to specify attributes. Note that rather than a format like <URL="something">X</URL>, which would be more consistent with the other pieces of HTML, the format of the anchor tag is <A something></A>. This format is useful because some complex tags, particularly the instructions for including graphics, hav dozens of variations. Imagine <IMAGELEFTBOTTOM="imagefile"> or something simi Instead, attributes were included in the design of HTML to allow a wide variety of different formats to be easily specified.

The greatest value of these attributes in formatting tags is that you can provide a wonderful sense of consistency in the interface and presentation of information. You can have half your links lead to other pages on the Web, with three links moving the reader farther down in the document and the rest of the links leading to other pages on your own server. The links will all have the same appearance (blue and underlined in most cases) and function (causing the browser to "jump" directly to the specified page).

Up to this point, the documents shown in this book have been short, with the majority of the information confined to the first screen of information within the browser. Such an approach to Web document design results in pages that are easy to navigate. Sometimes, however, it's impossible to keep a document from stretching over several pages.

If I wanted to write this chapter as an HTML document, I could make each section a different document. Even then, however, some of those sections would be sufficiently long that readers would be forced to scroll to find the information that they want.

A better layout is one in which the entire chapter is a single document, but the topic headers actually are links to the appropriate spots farther down in the page. Clicking on a table of contents entry like Adding jump hot links to your Web page, for example, would move you to that spot instantly. The challenge, of course, is to figure out when a certain length document is best as a single HTML file, and when it is best as a set of files. My rule of thumb is to move pages at logical jump points and to try to minimize load time for readers. This chapter could be a single HTML document, but the book itself would clearly be a set of documents.

The targets of internal Web document jumps are known as *anchors*. The HTML tag for an anchor point is another value for the <A> tag: <A name=*value*>. The *value* can be any sequence of characters, numbers, and punctuation marks, but I recommend that you stick with a strategy of mnemonic anchor names, such as *section1* or *references*. Some clients insist that all characters in the anchor be in lowercase, so you may want to experiment before you build a complex document.

The following example shows how a set of tags might look in a paper entitled "Sex Education: Morals versus Ethics." The anchors are built from the author names and years of publication, which then can be referenced as links in the rest of the document.

```
<A NAME="references">
<H3>References</H3></A>
<OL>
<LI><A NAME="driskill-delampo92">
```

```
Driskill, P., & Delampo, R. L. (1992)</A>Sex education in the
1990s: A systems perspective on family sexuality. <I>Journal of Sex
Education and Therapy</I>, 18, 175-185.
<LI><A name="dewitt93">
Elmer-Dewitt, P. (1993)</A>Playing the case for abstinence.<I>Time</I>,
141(6), 64-65.
<LI><A name="favgordon92">
...
<LI><A name="gibbs93">
Gibbs, N. (1993)</A> How should we teach our children about sex? <I>Time</I>,
141(5), 60-66.
<LI><A name="gordon90">
Gordon, S. (1990)</A> Sexuality education in the 1990s. <I>Health
Education</I>, 21(5), 4-5.
<LI><A name="greenberg90">
Greenberg, J. S. (1990)</A> Preparing teachers for sexuality education.
<I>Theory into Practice</I>, 28, 227-232.
<LI><A name="gudorf91">
Gudorf, C. (1991)</A> Are you giving your kids double messages about
sex. <I>U.S. Catholic</I>, 56(9), 20-27.
<LI><A name="haffnee90">
Haffner, D. W. (1990)</A> AIDS and sexuality education. <I>Theory into
Practice</I>, 28, 198-202.
<LI><A name="hale92">
Hale, J. P. (1992)</A> Sex ed up to date. <I>National Review</I>, May
25, 31-33.
<LI><A name="kirby93">
Kirby, D. (1993).</A> Research on effectiveness of sex education pro-
grams.<I>Theory into Practice</I>, 28, 165-171.
</OL>
```

Viewed in a Web browser (see Figure 7-1), the preceding document looks like an attractive list of journal references. Because anchors are destinations on the current page rather than links to go elsewhere, the text between the <A NAME> and </A> is not highlighted in any way when displayed.
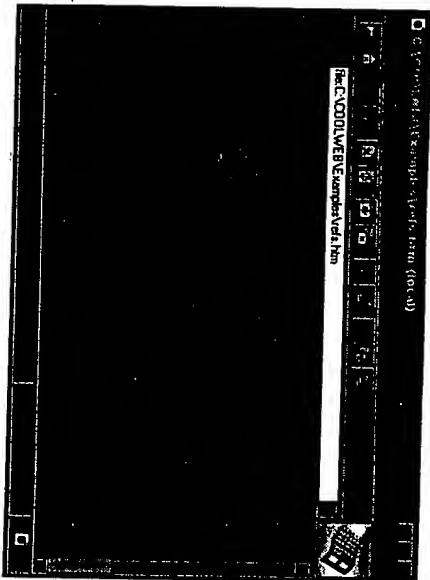
Figure 7-1: References from a sex-education paper.

What I've done in the example here is not only add links to each of the reference citations but also add a link to the references section itself, which could then be easily included as part of a table of contents to the document. This would offer readers the chance to jump directly to the opening arguments, supporting arguments, conclusions, or (in this case) the references section of the document.

Adding Jump Links to Your Web Pages

The partner of an anchor in HTML documents is the formatting tag that defines the *jump*, or active link within the document. It's a variant on the `<A>` format that you're already familiar with; the tag turns out to be another HREF hypertext reference, this time with the URL replaced by the anchor name prefaced by a pound sign (#).

For example, if the anchor that you want to connect is specified as `<A NAME="references">`, you would specify the *jump* as `<A HREF="#references">go to reference info</A>`.

In creating cool Web documents, the goal is to avoid phrases such as the following:

Instead, try to integrate the references more smoothly into the text, as follows:

For a document that discusses ingredients for mixed fruit drinks, for example, the HTML source might look like the following:

This list would be formatted attractively, as Figure 7-2 shows. The format is identical to the way the information would be presented if the links were external, perhaps even on different servers on the Web.

For a different way to use internal references, examine the following snippet from the main section of the sex-education paper, which includes internal links to the anchors in the references section. Notice that an anchor also has been assigned to the section head.
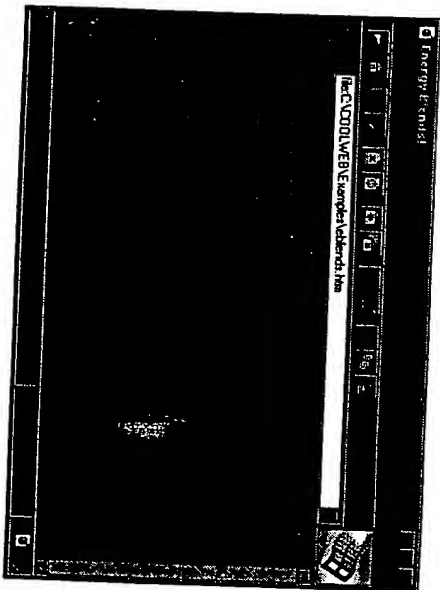
Seven values for holistic sexuality education have been proposed, rang-
ing from the observation that sexual decisions should support the dig-
nity, equality, and worth of each individual and that parenthood be
quite many responsibilities that adolescents are usually unable to
assume to the idea that it's usually preferable for adolescents to
refrain from sexual intercourse. (<A HREF="#a_gordon92">Fay &amp;
Gordon, 1992</A>):
<P>
<A NAME="the debate">
<H2>The Debate over Research Findings</H2></A>
Research on sex education curricula is controversial. Values and Choices
has been studied in various settings, and while initial post-course
attitudes of students demonstrated they were significantly more support-
ive of abstinence and significantly less likely to <I>intend to</I>
engage in sexual intercourse, followup interviews found months later
revealed that the differences between the group and national norms was
no longer statistically significant (<A HREF="#kirby90">Kirby, 1990</
A>). Many educators also observe that none of the pro-abstinence only.
curricula research has been submitted to peer-review journals (<A
HREF="#tapia93">Tapia, 1993</A>).

<P>
<A>
One research project, oft-quoted by abstinence-only supporters, demon-
strated that pregnancy rates among students having taken the Sex Respect
program at a San Diego school were an impressive 45 percent lower than
those who hadn't. Later research by the San Diego <I>Union</I> (<A HREF="#owen">Owen,
1993</A>
found that much of the information had been fabricated (<A HREF="#dewitt92">Elmer-DeWitt,
1993</A>. <A HREF="#tapia93">Tapia,
1993</A>).
<P>

In a browser, the paper is displayed in a format that is quite pleasing to the eye and
easy to navigate. All the hot links and anchor information are appropriately hidden
from view or sufficiently subtle that the reader can focus on the material itself (see
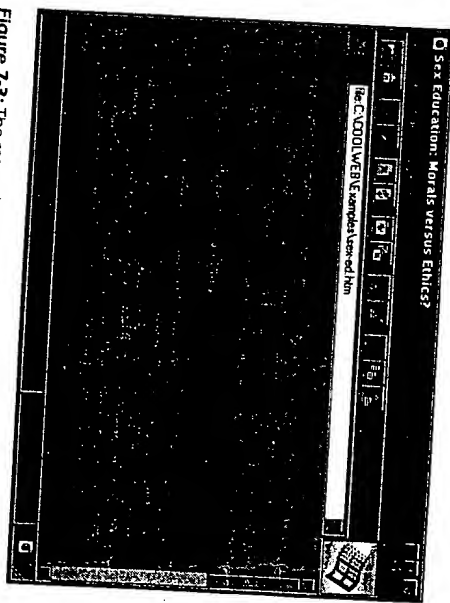Figure 7-3).

When scholars first envisioned the need for citations in research to defend and explain
where particular views and ideas originate, what they dreamed of is surprisingly close
to what we now can include in Web documents. If you are surprised by something in
such a paper, or if the paper whetted your appetite for a more extensive treatment of
the subject, you can click on the author citation. You then instantly move to the
references section, and the appropriate citation is shifted to the top of the screen so
that you can identify the information that you seek.

Figure 7-4 shows what would happen if you wanted more information on the Fay & Gordon article and clicked the `<A HREF="#fay-gordon92">` link.
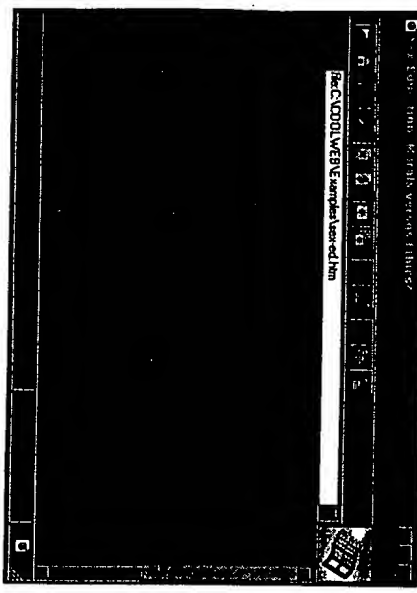

Figure 7-4: Web browser jumped to the references.

One thing to keep in mind when you specify your anchor points is the fact that the exact spot of the reference becomes the top of the displayed document. A sequence like the following shows the possible danger therein:

```
<H2>Bananas</H2>
<A NAME="BANANAS">The banana</A>
is one of the most exotic, yet most easily purchased fruits in the
world.
```

The raw Web document is attractively formatted, but the resulting behavior will not be what you seek: Users who jump to the "#BANANA" tag will have the preceding sentence in the first line of their displays; the `<H2>` header will be one line off-screen. A much better idea is to flip the two items, as follows:

```
<A NAME="BANANAS">
<H2>Bananas</H2></A>
The banana is one of the most exotic, yet most easily purchased fruits
in the world.
```

> **note**
>
> *Always test your Web documents before unleashing them on the world.*
> I can't overemphasize this. Subtle problems with where your anchor
> tags are placed, for example, are classic mistakes found in otherwise
> cool Web pages.

Jumping Into Organized Lists

Anchors and jump points also are commonly used to help readers navigate large lists of alphabetically sorted information. Consider the following simple phone book layout:

```
<TITLE>Jazz Institute Internal Phone Book</TITLE>
<H1>Jazz Institute Internal Phone Book</H1>
<P>
Section Shortcuts:
<A HREF="#a-c">[A-C]</A>
<A HREF="#d-h">[D-H]</A>
<A HREF="#i-l">[I-L]</A>
<A HREF="#m-n">[M-N]</A>
<A HREF="#o-s">[O-S]</A>
<A HREF="#t-z">[T-Z]</A><BR>
<H2><A name="a-c">[A-C]</A></H2>
Benson, George (x5631)<BR>
Coleman, Ornette (x6143)<BR>
Coltrane, John (x5644)
<H2><a name="d-h">[D-H]</A></H2>
Dorsey, Tom (x9412)<BR>
```

(continued)

Figure 7-5: The Jazz Institute phone book.

Although the HTML in the preceding example is complex, Figure 7-5 shows that the result not only looks cool but is also useful.

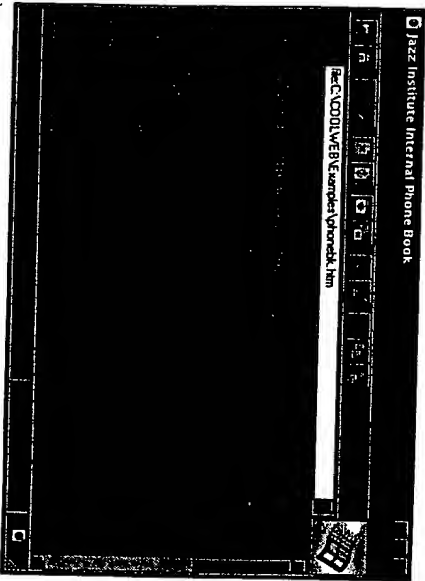You can start to get a feeling for how complex HTML text can become by imagining that each entry in the phone list actually is a link to that person's home page or other material somewhere else on the Web. Every line of information displayed could be the result of four or more lines of HTML.

Linking to Jump Targets in External Documents

Now that you're familiar with the concept of jumping around within a single document, you'll be glad to hear that you can also add the *#anchor* notation to the end of any Web URL to make that link move directly to the specific anchor point in the document.

Suppose, for example, that the sex-education paper resided on a system called `research.educ.purdue.edu` and that its full URL was `http://research.educ.purdue.edu/Students/Taylor.D/5000/sex-ed.html`.

A visit to the page reveals that a variety of anchor tags are embedded therein, including the references tag at the beginning of the references section of the paper. You could link directly to that spot from another Web page, as in the following example:

```
Other people, on the Internet, have chosen different references
for their exploration of the ethical issues surrounding
sex education in the United States. Notable is the article
<A HREF="http://research.educ.purdue.edu/Students/Taylor.D/5000/
sex-ed.html">Sex Education: Morals or Ethics?</A> by
Dave Taylor, with this extensive
<A HREF="http://research.educ.purdue.edu/Students/Taylor.D/5000/
sex-ed.html#references">set of references</A>.
Other sources to explore include
```

The prose is displayed in a Web browser as you would expect. Figure 7-6 shows that the HREF that includes the specific internal link #references is displayed as just a link, underlined and in blue.
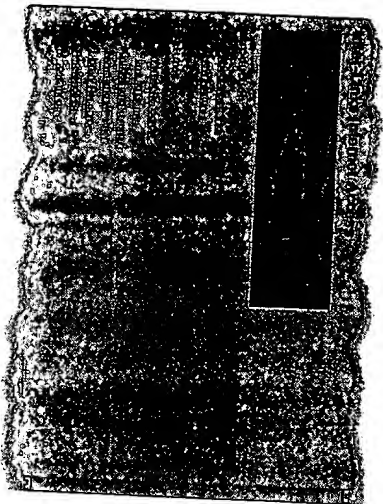
Figure 12-10: Navigate the Web with Inter-Links.

Figure 12-10 also illustrates something else: A Web site can offer a great deal of useful information without being particularly cool. (I expect that, by now, you could write a page like this with your eyes closed.)

The InterNIC Directory of Directories

http://ds.internic.net/ds/dsdirofdirs.html

The Internet may appear to be an amazing anarchy, but there is a place with some semblance of order, a slight method to the madness. What little control that exists originates at the Internet Network Information Center, known informally as the InterNIC. InterNIC subcontracts with different vendors. The directory information is run by AT&T, as Figure 12-11 makes obvious.

This site has a ton of great stuff, but AT&T dropped the ball in the grand scheme, because the directory, believe it or not, doesn't have any actual links to other sites! If you find a directory that sounds interesting, you have to either print out that page or write down the URL that you want, just to type it again in your browser — not a very cool arrangement, in my opinion. Still, this site is an important one, and you'll want to include your information here if that information is relevant.
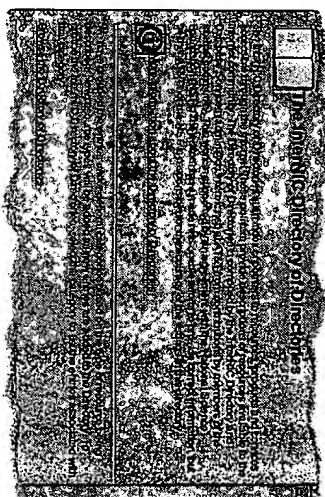
Figure 12-11: The InterNIC Directory of Directories.

This section contains sites that are dedicated to commerce.

Business-Only Sites

The Internet Mall

http://www.iw.com/imall/

A site that's near and dear to my heart is the Internet Mall, the only commercial directory on the Internet that focuses exclusively on companies that actually sell products or services. It's also a favorite of mine because, in fact, I run the Internet Mall! If you have a business venture that's just joined the Web, you definitely should let me know so that I can add you to the Internet Mall. Figure 12-12 shows the opening screen.

The design of this site shows one way that you can work with small graphics and still have an interesting layout: Make your button graphics meaningful.
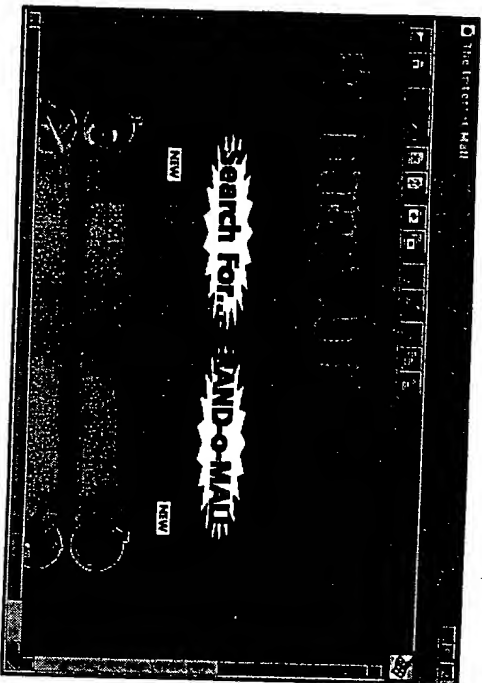
Figure 12-12: The Internet Mall.

Open Market's Commercial Sites Index

http://www.directory.net/

If your business is on the Web and you want to ensure that you're in the electronic equivalent of the yellow pages, Open Market's Commercial Sites Index is the best choice available (see Figure 12-13). Listing almost 3,500 commercial sites, the Open Market site is a great place to start if you're looking for other companies on the Web.

The design of the Open Market site is rather unusual; it's the only important announcement site that has a search input box near the top of the layout. I don't particularly like the design because I like to browse by category. But when things are organized purely by the name of the business, this approach is better than just having a long list of names.
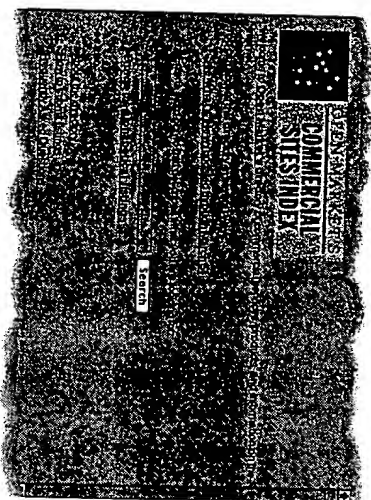

Figure 12-13: Open Market's Commercial Sites Index.

Apollo Advertising

http://apollo.co.uk/

A very different approach — one reminiscent of City.Net, shown earlier in this chapter — is the Apollo Advertisement site, located in England (see Figure 12-14). Notice particularly the size of the world graphic and the very attractive APOLLO graphic at the top of the page. The prose at this site (including frequent typographical errors) is frustrating, but Apollo Advertising still can be a terrific spot to advertise your new Web site.
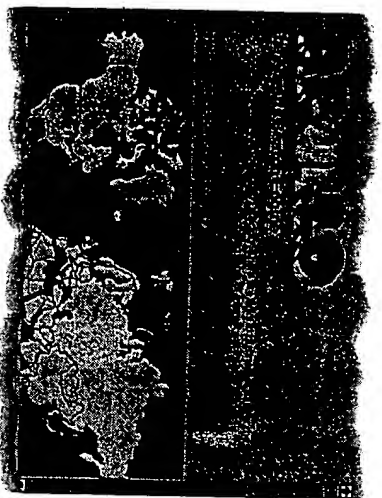
Figure 12-14: *Apollo Advertising.*

If you scroll below the map of the world, you see a list of bulleted items for each country. That list is invaluable for people with slower connections who opt not to preload all graphics before working with a Web page.

> Don't forget that some users may not load the graphics. Always make sure that your design tries to take this fact into account.

BizWeb

http://www.bizweb.com/

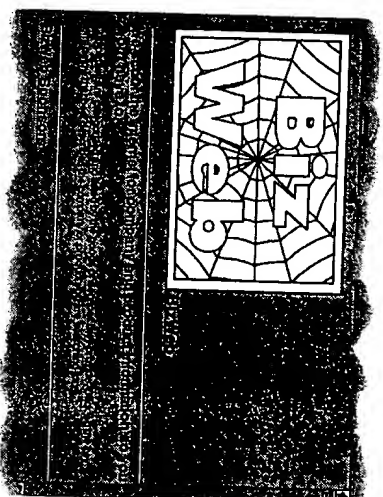BizWeb offers an index on the very first page of the Web site (see Figure 12-15).

Figure 12-15: BizWeb

You can see that the designer got a *little* carried away with the opening graphic. Rather than functioning as a cool design element, the graphic forces users to scroll down the page to find any interesting information — not the best design, in my view. The organization of shops and companies at this site, however, is very good, and BizWeb is a good spot to list your commercial Web site.

Fee-Based Advertising Spots

Plenty of Web sites charge you money for a listing and/or require you to join their organization in order to get a link from their page to yours. Are these spots worth it? You'll have to decide for yourself. If you're a small entrepreneur, you probably won't be able to ante up the fees.

Many fee-based sites do, however, offer interesting approaches to Web page design. An example is MecklerWeb, from MecklerMedia (see Figure 12-16). A listing at this site, like any of the commercial spots, isn't cheap. But if you have a compelling need to generate traffic on your Web site, joining one of these sites can be the way to go.

information

The small subset of data that is actually useful and meaningful to you at the current moment.

in-line graphics

Graphics that appear beside the text in a Web page when viewed via a browser (as opposed to graphics that require separate viewer programs).

the *Internet*

The global network of networks that enables some or all of the following: exchange of e-mail messages, files, *Usenet* newsgroups, and World Wide Web pages. Also known as *the Net*.

italics

A typographic convention typically used for emphasis or citations; *this text is italicized.*

link

A word, picture, or other area of a Web page that users can click on to move to another spot in the document or to another document.

markup language

A special type of programming language that allows users to describe the desired appearance and structural features of a document.

Mosaic

The original World Wide Web browser program developed at the National Center for Supercomputing Applications at the University of Illinois. Its release in 1993 sparked the explosive growth of the Web and helped boost interest in the Internet. Many software programs similar to Mosaic — commercial, shareware, and freeware versions for almost any platform — have been developed since Mosaic's release.

the *Net*

Another term for the *Internet.*

Netscape

A World Wide Web browser developed by Netscape Communications, created by some of the original NCSA Mosaic programmers. Netscape, more formally Netscape Navigator, may be the most popular browser on the Net.

ordered list

A list of items, often numbered, that describes steps in a process (steps 1, 2, 3, and so on).

pointer

A word, picture, or other area that users can click on to move to another spot in the document or to another document; same as *link.*

port

A particular "frequency" used to transfer a particular type of information between Internet computers; FTP uses a specific port, whereas HTTP uses another. Somewhat analogous to television channels.

SGML (Standardized General Markup Language)

The markup language that is the parent of HTML. SGML provides a means of defining markup for any number of document types (such as HTML). You don't mark up text in SGML, per se — you mark up text using an application or instance of SGML. HTML is one of those applications.

TCP/IP (Transfer Control Protocol/Internet Protocol)

A system that networks use to communicate with each other over the Internet.

telnet

An Internet service that enables users to log on to a remote system and work on it as though they were directly connected to the system on site.

typeface

A particular design of a set of characters and symbols. Times and Courier are common typefaces. A specific size and style of a typeface — Courier 12 point, for example — is known as a *font.*